

D. ACTUARIAL ANALYSIS OF BENEFIT DISBURSEMENTS FROM THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES

(Required by section 201(c) of the Social Security Act)

Effective January 1957, monthly benefits have been payable from the OASI Trust Fund to disabled children aged 18 and over of retired and deceased workers in those cases in which the disability of the child has continued since childhood. Effective February 1968, reduced monthly benefits have been payable from this trust fund to disabled widows and widowers beginning at age 50.

On December 31, 1981, about 527,000 persons were receiving monthly benefits with respect to disability from the OASI Trust Fund. In addition to disabled beneficiaries, this total includes 43,000 mothers and fathers. These mothers and fathers (wives or husbands under age 65 of retired-worker beneficiaries and widows or widowers of deceased insured workers) met all other qualifying requirements and were receiving full-rate (i.e., not reduced-for-age) benefits solely because they had at least one disabled-child beneficiary in their care. Benefits paid from this trust fund to persons receiving benefits with respect to disability totaled \$1,421 million in calendar year 1981. Similar figures are presented in Table 25 to show the experience in selected calendar years during 1960-81. Figures relating to past experience for years not shown are contained in prior annual reports.

TABLE 25.—BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-86
[Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments ¹		
	Total	Children ²	Widows and widowers	Total	Children ²	Widows and widowers ²
Past experience:						
1960.....	117	117	—	\$59	\$59	—
1965.....	214	214	—	134	134	—
1970.....	316	281	36	301	260	\$41
1975.....	435	376	59	664	560	104
1976.....	457	395	62	748	637	111
1977.....	480	414	65	868	748	120
1978.....	494	430	64	950	823	127
1979.....	507	445	62	1,071	946	125
1980.....	519	460	59	1,223	1,097	126
1981.....	527	473	54	1,421	1,296	125
Estimated future experience:⁴						
Alternative II-A:						
1982.....	532	484	48	1,575	1,462	113
1983.....	542	496	46	1,674	1,572	102
1984.....	554	510	44	1,821	1,725	96
1985.....	565	523	42	2,078	1,989	89
1986.....	576	536	40	2,340	2,257	83

TABLE 25.—BENEFITS PAYABLE FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES, SELECTED CALENDAR YEARS 1960-86 (Cont.)
 [Beneficiaries in thousands; benefit payments in millions]

Calendar year	Disabled beneficiaries, end of year			Amount of benefit payments ¹		
	Total	Children ²	Widows and widowers	Total	Children ²	Widows and widowers ²
Estimated future experience: ⁴ (Cont.)						
Alternative II-B:						
1982	532	484	48	\$1,575	\$1,462	\$113
1983	542	496	46	1,683	1,580	103
1984	554	510	44	1,864	1,766	98
1985	565	523	42	2,082	1,989	93
1986	576	536	40	2,291	2,203	88

¹Beginning in 1966, includes payments for vocational rehabilitation services.

²Reflects the effect of including certain mothers and fathers. (See text.)

³Reflects the offsetting effect of lower benefits payable to disabled widows and widowers who continue to receive benefits past age 60 (62, for disabled widowers, prior to 1973) as compared to the higher nondisabled widow's (and widower's) benefits that would otherwise be payable.

⁴The estimates are based on the alternative II-A and II-B economic assumptions and reflect the resulting assumed changes under the automatic increase provisions, as described in an earlier section.

Table 25 also shows the estimated future experience in calendar years 1982-86, under the alternative II-A and II-B assumptions described in an earlier section. Total benefit payments from the OASI Trust Fund with respect to disabled beneficiaries are estimated to increase from \$1,575 million in calendar year 1982 to \$2,340 million in calendar year 1986, under the alternative II-A assumptions, and to \$2,291 million in calendar year 1986 under the alternative II-B assumptions.

In calendar year 1981, benefit payments (including expenditures for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including payments from the latter fund to all children and spouses of disabled-worker beneficiaries) totaled \$18,621 million, of which \$1,421 million, or 7.6 percent, represented payments from the OASI Trust Fund. Similar figures for selected calendar years during 1960-81 and estimates for calendar years 1982-86, under alternative II-A and II-B economic assumptions, are presented in Table 26. Figures relating to past experience for years not shown in Table 26 are contained in prior annual reports.

TABLE 26.—BENEFIT PAYMENTS UNDER THE OASDI PROGRAM WITH RESPECT TO DISABLED BENEFICIARIES, BY TRUST FUND, SELECTED CALENDAR YEARS 1960-86
[Amounts in millions]

Calendar year	Benefit payments ¹ from -			
	OASI Trust Fund			As a percentage of total benefit payments with respect to disabled beneficiaries
	Total ²	DI Trust Fund ³	Amount ⁴	
Past experience:				
1960	\$627	\$568	\$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1975	9,169	8,505	664	7.2
1976	10,803	10,055	748	6.9
1977	12,415	11,547	868	7.0
1978	13,549	12,599	950	7.0
1979	14,857	13,766	1,071	7.2
1980	16,738	15,515	1,223	7.3
1981	18,621	17,200	1,421	7.6
Estimated future experience:⁴				
Alternative II-A:				
1982	19,317	17,742	1,575	8.2
1983	19,970	18,296	1,674	8.4
1984	20,762	18,941	1,821	8.8
1985	21,678	19,800	2,078	9.5
1986	23,185	20,845	2,340	10.1
Alternative II-B:				
1982	19,308	17,733	1,575	8.2
1983	20,053	18,370	1,683	8.4
1984	21,218	19,354	1,864	8.8
1985	22,731	20,649	2,082	9.2
1986	24,324	22,033	2,291	9.4

¹Beginning in 1966, includes payments for vocational rehabilitation services.

²Benefit payments to disabled workers and their children and spouses.

³Benefit payments to disabled children aged 18 and over, to certain mothers and fathers (see text), and to disabled widows and widowers (see footnote 3, Table 25).

⁴The estimates are based on the alternative II-A and II-B assumptions and reflect the resulting assumed changes under the automatic increase provisions, as described in an earlier section.

E. ACTUARIAL STATUS OF THE TRUST FUNDS

Historically, the actuarial status of the OASDI program has been measured by the actuarial balance, as described earlier in this section. In recent reports, medium-range and long-range actuarial balances have been shown. They have been computed, respectively, over the 25-year and 75-year periods beginning with the calendar year of issuance of the report. In accordance with this practice, the statements of the medium-range and long-range actuarial statuses contained in this report pertain to the periods 1982-2006 and 1982-2056, respectively. Also presented are actuarial balances for the second and third 25-year periods within the 75-year period. As described earlier in this section, year-by-year time series or 25-year averages may reveal patterns or problems which would be masked by a single 75-year average.

In addition to the medium-range and long-range actuarial balances, two other indicators of the financial condition of the trust funds are shown in this report. One is the time series of differences between the scheduled tax rates and the projected cost rates (annual cost, or outgo, expressed as a percentage of taxable payroll), and the other is the time series of projected trust fund ratios (assets at the beginning of the year expressed as a percentage of outgo during the year). These indicators were discussed in concept earlier in this section, and estimates of their numerical values are discussed later.

The cost rates are useful in establishing tax rate schedules according to the current-cost method of financing described earlier. However, the cost rates do not reflect the cost of increasing the trust fund ratio from its current level, or even maintaining it at that level. Therefore, any consideration of alternative financing provisions must also take into account the desired level of the trust fund ratio and the time by which that level is to be attained. The tax schedule can then be designed so that the projected annual tax income not only covers the projected annual outgo, but also produces the desired trust fund ratios. For example, if it were considered appropriate to increase the combined OASI and DI Trust Funds ratio to 50 percent of the projected annual outgo by the end of the 75-year period, it would be necessary to raise the 75-year average tax rate (the combined employee-employer rate, as discussed earlier) by an additional 0.06 percentage points per year above the amount needed to cover the outgo under alternative II-A and by 0.07 percentage points under alternative II-B.

As discussed earlier, the cost estimates are sensitive to changes in many economic and demographic assumptions upon which they are based. However, the degree of sensitivity to change varies considerably among the various assumptions. For example, variations in projected fertility rates have little effect on the medium-range cost estimates, because almost all covered workers and beneficiaries projected for this period were born prior to the start of the projection period. However, variations in economic factors such as wage and price increases have significant effects on the estimates, even in the medium-range period. In general, the degree of confidence that can be placed in the assumptions and estimates is greater for the medium-range period than for the long-range period. Nonetheless, even over the medium-range period, the cost

projections are only an indication of the trend and general range of the actual cost of the program. Appendix B contains a more detailed discussion of the effects on the cost estimates of varying selected economic and demographic assumptions.

Table 27 presents a comparison of the estimated cost rates under alternatives II-A and II-B with the OASDI tax rates. The table shows that, under alternative II-A, after 1984, the OASDI system is projected to have a surplus of tax income over outgo in each year of the medium-range period and then beyond to about 2015, after which the system is projected to have annual deficits. These deficits are projected to grow rapidly to a peak of 3.49 percent of taxable payroll in 2035. In the remainder of the long-range period, they decline slightly and then fluctuate over a rather narrow range, between 3.0 and 3.3 percent.

This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 1.55 percent of taxable payroll and a long-range actuarial deficit of 0.82 percent. Notwithstanding the medium-range surplus, the deficits in the early years are sufficient to exhaust the OASI Trust Fund no later than July of 1983, as shown elsewhere in this section.

TABLE 27.—ESTIMATED COST RATES OF THE OASDI SYSTEM UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1982-2060
[As percent of taxable payroll]

Calendar year	Estimated cost rate			Tax rate	Difference ¹
	OASI	DI	Total		
Alternative II-A:					
1982	10.18	1.33	11.51	10.80	-0.71
1983	10.21	1.25	11.46	10.80	-.66
1984	10.22	1.19	11.41	10.80	-.61
1985	10.07	1.13	11.20	11.40	.20
1986	9.91	1.09	11.00	11.40	.40
1987	9.75	1.06	10.81	11.40	.59
1988	9.63	1.03	10.66	11.40	.74
1989	9.53	1.02	10.55	11.40	.85
1990	9.45	1.01	10.47	12.40	1.93
1991	9.38	1.01	10.39	12.40	2.01
1992	9.35	1.03	10.37	12.40	2.03
1993	9.33	1.04	10.37	12.40	2.03
1994	9.29	1.05	10.35	12.40	2.05
1995	9.25	1.07	10.32	12.40	2.08
1996	9.15	1.10	10.25	12.40	2.15
1997	9.07	1.13	10.20	12.40	2.20
1998	9.00	1.16	10.15	12.40	2.25
1999	8.92	1.18	10.10	12.40	2.30
2000	8.82	1.20	10.03	12.40	2.37
2001	8.73	1.23	9.96	12.40	2.44
2002	8.68	1.25	9.93	12.40	2.47
2003	8.66	1.28	9.94	12.40	2.46
2004	8.65	1.32	9.97	12.40	2.43
2005	8.68	1.37	10.06	12.40	2.34
2006	8.72	1.39	10.11	12.40	2.29
2010	9.17	1.52	10.69	12.40	1.71
2015	10.35	1.61	11.96	12.40	.44
2020	11.88	1.65	13.53	12.40	-1.13
2025	13.36	1.61	14.96	12.40	-2.56
2030	14.22	1.53	15.75	12.40	-3.35
2035	14.39	1.50	15.89	12.40	-3.49
2040	14.12	1.52	15.64	12.40	-3.24
2045	13.93	1.56	15.48	12.40	-3.08
2050	13.98	1.55	15.53	12.40	-3.13
2055	14.10	1.53	15.63	12.40	-3.23
2060	14.12	1.52	15.63	12.40	-3.23
25-year averages:					
1982-2006	9.31	1.16	10.46	12.01	1.55
2007-2031	11.58	1.57	13.15	12.40	-.75
2032-2056	14.11	1.54	15.65	12.40	-3.25
75-year average:					
1982-2056	11.66	1.42	13.09	12.27	-.82

TABLE 27.—ESTIMATED COST RATES OF THE OASDI SYSTEM UNDER ALTERNATIVES II-A AND II-B AND COMPARISON WITH TAX RATES, CALENDAR YEARS 1982-2060 (Cont.)
[As percent of taxable payroll]

Calendar year	Estimated cost rate			Tax rate	Difference ¹
	OASI	DI	Total		
Alternative II-B:					
1982.....	10.42	1.36	11.78	10.80	-0.98
1983.....	10.38	1.27	11.65	10.80	-.85
1984.....	10.42	1.21	11.63	10.80	-.83
1985.....	10.52	1.18	11.70	11.40	-.30
1986.....	10.55	1.16	11.71	11.40	-.31
1987.....	10.57	1.14	11.71	11.40	-.31
1988.....	10.56	1.12	11.68	11.40	-.28
1989.....	10.55	1.11	11.66	11.40	-.26
1990.....	10.54	1.10	11.64	12.40	.76
1991.....	10.49	1.10	11.59	12.40	.81
1992.....	10.43	1.11	11.54	12.40	.86
1993.....	10.39	1.12	11.51	12.40	.89
1994.....	10.33	1.13	11.46	12.40	.94
1995.....	10.27	1.14	11.42	12.40	.98
1996.....	10.18	1.17	11.35	12.40	1.05
1997.....	10.07	1.20	11.27	12.40	1.13
1998.....	9.96	1.23	11.19	12.40	1.21
1999.....	9.85	1.25	11.10	12.40	1.30
2000.....	9.75	1.28	11.03	12.40	1.37
2001.....	9.66	1.30	10.96	12.40	1.44
2002.....	9.58	1.32	10.90	12.40	1.50
2003.....	9.52	1.35	10.87	12.40	1.53
2004.....	9.48	1.39	10.87	12.40	1.53
2005.....	9.50	1.44	10.95	12.40	1.45
2006.....	9.53	1.46	10.99	12.40	1.41
2010.....	9.94	1.59	11.53	12.40	.87
2015.....	11.12	1.69	12.82	12.40	-.42
2020.....	12.72	1.73	14.44	12.40	-2.04
2025.....	14.29	1.68	15.97	12.40	-3.57
2030.....	15.23	1.60	16.83	12.40	-4.43
2035.....	15.45	1.57	17.02	12.40	-4.62
2040.....	15.20	1.59	16.80	12.40	-4.40
2045.....	15.03	1.63	16.66	12.40	-4.26
2050.....	15.09	1.63	16.72	12.40	-4.32
2055.....	15.21	1.60	16.81	12.40	-4.41
2060.....	15.22	1.59	16.81	12.40	-4.41
25-year averages:					
1982-2006.....	10.14	1.23	11.37	12.01	.64
2007-2031.....	12.43	1.65	14.08	12.40	-1.68
2032-2056.....	15.20	1.61	16.81	12.40	-4.41
75-year average:					
1982-2056.....	12.59	1.50	14.09	12.27	-1.82

¹The tax rate minus the OASDI cost rate. Positive differences are referred to as surpluses, and negative differences, as deficits.

Note: The definitions of alternatives II-A and II-B, cost rate, tax rate, and taxable payroll are presented in the text.

This table also shows that, under alternative II-B, annual OASDI surpluses are not projected until 1990. Annual surpluses are projected thereafter until about 2010, after which deficits are projected for each year. These projected deficits grow more rapidly than under alternative II-A, peaking around 2035 when the projected annual deficit is 4.62 percent of taxable payroll. Although the annual deficits in the remainder of the long-range period are significantly higher than under alternative II-A, they follow a similar pattern. First they decline slightly, and then they fluctuate over a rather narrow range, between 4.2 and 4.5 percent of taxable payroll. This pattern of annual surpluses and deficits produces a medium-range actuarial surplus of 0.64 percent of taxable payroll and a long-range actuarial deficit of 1.82 percent. As under alternative II-A, the deficits projected under alternative II-B in the early years are sufficient to exhaust the OASI Trust Fund no later than July 1983 (again, as shown elsewhere in this section).

The long-range actuarial deficits under alternatives II-A and II-B are about 6 and 13 percent of the estimated average long-range cost rates (of 13.09 and 14.09 percent of taxable payroll), respectively. Because the deficit in each case exceeds 5 percent of the estimated average cost rate (that is, exceeds 0.65 and 0.70 percent of taxable payroll, respectively), the system is not regarded as being in close actuarial balance over the long-range period under either alternative.

The reason for the rapid increase in the estimated cost rates after the medium-range period (under either alternative) is that, at that time, the projected number of beneficiaries is increasing faster than the projected number of covered workers. This occurs because the relatively large number of persons born during the period from the end of World War II through the early 1960's (when fertility rates were high) will reach retirement age, and begin to receive benefits, while the relatively small number of persons born during the recent past, current, and projected periods of low fertility rates will comprise the labor force. During the last years of the projection period, the projected OASI cost rates generally stabilize at a fairly high level, thereby reflecting, in part, a stabilization in the projected ratio of the number of beneficiaries and the number of covered workers. Such stabilization results from the relatively smooth pattern of the assumed fertility rates. A comparison of the numbers of beneficiaries and covered workers, both historically and as projected under all four alternatives, is shown in Table 28.

TABLE 28.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1945-2060

Calendar year	Covered workers ¹ (in thousands)	Beneficiaries ² (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,200	7,563	—	7,563	8.6	12
1960	72,530	13,740	522	14,262	5.1	20
1965	80,680	18,509	1,648	20,157	4.0	25
1970	93,090	22,618	2,568	25,186	3.6	28
1975	100,200	26,998	4,125	31,123	3.2	31
1980	*114,300	30,384	4,734	35,118	*3.3	*31
Alternative I:						
1982	116,004	31,476	4,370	35,845	3.2	31
1985	126,557	33,028	4,047	37,075	3.4	29
1990	137,093	36,069	4,053	40,122	3.4	29
1995	141,637	37,609	4,249	41,858	3.4	30
2000	146,513	38,585	4,803	43,388	3.4	30
2005	151,749	40,066	5,506	45,572	3.3	30
2010	155,761	43,234	6,140	49,374	3.2	32
2015	158,066	48,449	6,552	55,001	2.9	35
2020	159,891	54,608	6,722	61,330	2.6	38
2025	162,842	60,782	6,612	67,394	2.4	41
2030	167,424	64,647	6,404	71,051	2.4	42
2035	173,020	66,058	6,419	72,477	2.4	42
2040	178,967	65,587	6,679	72,266	2.5	40
2045	184,936	65,452	7,045	72,497	2.6	39
2050	191,223	66,554	7,289	73,843	2.6	39
2055	198,021	68,258	7,451	75,709	2.6	38
2060	205,183	69,974	7,676	77,650	2.6	38
Alternative II-A:						
1982	115,955	31,482	4,375	35,857	3.2	31
1985	124,328	33,106	4,060	37,166	3.3	30
1990	133,921	36,431	4,126	40,557	3.3	30
1995	138,773	38,410	4,467	42,897	3.2	31
2000	144,133	39,823	5,193	45,016	3.2	31
2005	148,771	41,745	6,031	47,776	3.1	32
2010	151,577	45,376	6,753	52,129	2.9	34
2015	152,296	51,070	7,205	58,275	2.6	38
2020	152,100	57,789	7,372	65,161	2.3	43
2025	152,505	64,578	7,218	71,796	2.1	47

TABLE 28.—COMPARISON OF OASDI BENEFICIARIES AND COVERED WORKERS BY ALTERNATIVE, CALENDAR YEARS 1945-2060 (Cont.)

Calendar year	Covered workers ¹ (in thousands)	Beneficiaries ² (in thousands)			Covered workers per OASDI beneficiary	Beneficiaries per 100 covered workers
		OASI	DI	Total		
Alternative II-A: (Cont.)						
2030.....	154,100	69,188	6,946	76,134	2.0	49
2035.....	156,276	71,317	6,894	78,211	2.0	50
2040.....	158,430	71,497	7,073	78,570	2.0	50
2045.....	160,219	71,893	7,316	79,209	2.0	49
2050.....	162,023	73,079	7,392	80,471	2.0	50
2055.....	164,080	74,378	7,377	81,755	2.0	50
2060.....	166,318	75,258	7,422	82,680	2.0	50
Alternative II-B:						
1982.....	115,308	31,483	4,374	35,857	3.2	31
1985.....	123,300	33,106	4,061	37,167	3.3	30
1990.....	132,410	36,428	4,138	40,566	3.3	31
1995.....	137,644	38,408	4,486	42,894	3.2	31
2000.....	142,248	39,814	5,191	45,005	3.2	32
2005.....	146,798	41,725	6,028	47,753	3.1	33
2010.....	149,515	45,359	6,748	52,107	2.9	35
2015.....	150,148	51,048	7,198	58,246	2.6	39
2020.....	149,873	57,753	7,361	65,114	2.3	43
2025.....	150,205	64,542	7,207	71,749	2.1	48
2030.....	151,750	69,138	6,934	76,072	2.0	50
2035.....	153,889	71,277	6,882	78,159	2.0	51
2040.....	156,015	71,440	7,061	78,501	2.0	50
2045.....	157,777	71,824	7,304	79,128	2.0	50
2050.....	159,545	73,034	7,380	80,414	2.0	50
2055.....	161,573	74,313	7,364	81,677	2.0	51
2060.....	163,778	75,215	7,410	82,625	2.0	50
Alternative III:						
1982.....	115,178	31,496	4,376	35,872	3.2	31
1985.....	121,330	33,255	4,079	37,334	3.2	31
1990.....	130,300	37,125	4,246	41,371	3.1	32
1995.....	135,944	40,013	4,714	44,727	3.0	33
2000.....	140,370	42,415	5,560	47,975	2.9	34
2005.....	144,254	45,360	6,510	51,870	2.8	36
2010.....	145,600	50,080	7,293	57,373	2.5	39
2015.....	144,295	56,934	7,759	64,693	2.2	45
2020.....	141,475	64,913	7,898	72,811	1.9	51
2025.....	138,631	73,154	7,683	80,837	1.7	58
2030.....	136,560	79,327	7,324	86,651	1.6	63
2035.....	134,724	83,133	7,172	90,305	1.5	67
2040.....	132,593	84,945	7,214	92,159	1.4	70
2045.....	129,844	86,866	7,252	94,118	1.4	72
2050.....	126,971	89,022	7,071	96,093	1.3	76
2055.....	124,339	90,398	6,796	97,194	1.3	78
2060.....	121,968	90,672	6,587	97,259	1.3	80

¹Workers with taxable earnings at some time during the year.

²Beneficiaries with monthly benefits in current-payment status as of June 30.

³Preliminary.

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text. The numbers of beneficiaries do not include certain noninsured persons aged 72 and over with less than 3 quarters of coverage, the costs for whom are reimbursable to the OASI Trust Fund by the general fund of the Treasury. The number of such persons is estimated to be 69,500 as of June 30, 1982, and less than 1,000 by the turn of the century.

Table 28 shows that, even under alternative I, which includes high fertility rates and low mortality improvement, the number of covered workers per beneficiary declines from the current level of 3.2 to an ultimate level of 2.6. Under alternative III, which includes low fertility rates and high mortality improvement, the decline is far more dramatic, down to 1.3 workers per beneficiary. Under alternatives II-A and II-B, the decline is to 2.0 workers per beneficiary. The implication of this is that in the future there will be relatively fewer workers paying taxes and more retired persons receiving benefits. The impact that this will have on OASDI financing can be readily assessed by looking at the projected number of beneficiaries per hundred workers. Under alternatives I, II-A, II-B, and III, this rises to levels at the end of the long-range period of 38,

50, 50, and about 80, respectively. These levels are, respectively, 23, 61, 61, and about 150 percent higher than the current level of 31 beneficiaries per 100 covered workers. The implication of this result is that, in the absence of other program or financing changes, for the system to remain viable, the current OASDI tax rate would need to be increased to significantly higher levels solely because of the demographic shift.

Table 29 shows the OASDI cost rates estimated under each of the four alternatives. For ease of comparison, it also shows the scheduled tax rates. Under alternatives I and II-A, the cost rates generally decline slowly for the next 20 years. Under alternative II-B, the cost rates follow a similar pattern, except that the decline begins after 1987. In the last few years of the medium-range period, the cost rates reach their minimum values and then begin to rise slightly. Under alternative III, the cost rates rise steadily for about 15 years and decline slightly for about 5 years before beginning to rise again. After the medium-range period, under each alternative, the cost rates increase rapidly (because of the demographic shift discussed earlier). Under alternatives I, II-A, and II-B, the cost rates peak around 2035, while under alternative III, they continue to increase to the end of the long-range projection period.

The OASDI cost rates under alternatives I and III differ by more than 16 percentage points toward the end of the long-range period, although by only 4.01 percentage points at the end of the medium-range period. The highest cost rate occurring in the long-range period varies from 12.96 percent under alternative I to over 27 percent under alternative III, whereas the highest during the medium-range period varies within a much narrower band—from 11.51 (under alternative II-A) to 13.09 percent (under alternative III). The average long-range cost rate for the OASDI program varies from 10.98 percent of taxable payroll under alternative I to 18.74 percent under alternative III, while the average medium-range cost rate varies much less—from 9.75 to 12.73 percent.

TABLE 29.—TAX RATES AND ESTIMATED COST RATES OF THE OASDI SYSTEM BY ALTERNATIVE, CALENDAR YEARS 1982-2060
[As percent of taxable payroll]

Calendar year	Tax rate	Cost rate by alternative			
		I	II-A	II-B	III
1982	10.80	11.55	11.51	11.78	11.83
1983	10.80	11.29	11.46	11.65	12.02
1984	10.80	11.00	11.41	11.63	12.32
1985	11.40	10.74	11.20	11.70	12.40
1986	11.40	10.51	11.00	11.71	12.51
1987	11.40	10.30	10.81	11.71	12.62
1988	11.40	10.12	10.66	11.68	12.71
1989	11.40	9.82	10.55	11.66	12.77
1990	12.40	9.79	10.47	11.64	12.85
1991	12.40	9.61	10.39	11.59	12.86
1992	12.40	9.57	10.37	11.54	12.86
1993	12.40	9.62	10.37	11.51	12.90
1994	12.40	9.58	10.35	11.46	12.91
1995	12.40	9.52	10.32	11.42	12.97
1996	12.40	9.44	10.25	11.35	12.98
1997	12.40	9.38	10.20	11.27	12.93
1998	12.40	9.32	10.15	11.19	12.88
1999	12.40	9.25	10.10	11.10	12.82
2000	12.40	9.16	10.03	11.03	12.82
2001	12.40	9.06	9.96	10.96	12.81
2002	12.40	9.01	9.93	10.90	12.78
2003	12.40	8.99	9.94	10.87	12.80
2004	12.40	9.00	9.97	10.87	12.84
2005	12.40	9.06	10.06	10.95	12.97
2006	12.40	9.08	10.11	10.99	13.09
2010	12.40	9.49	10.69	11.53	13.92
2015	12.40	10.49	11.96	12.82	15.76

TABLE 29.—TAX RATES AND ESTIMATED COST RATES OF THE OASDI SYSTEM BY ALTERNATIVE, CALENDAR YEARS 1982-2060 (Cont.)
[As percent of taxable payroll]

Calendar year	Tax rate	Cost rate by alternative			
		I	II-A	II-B	III
2020	12.40	11.67	13.53	14.44	18.17
2025	12.40	12.64	14.96	15.97	20.70
2030	12.40	12.96	15.75	16.83	22.63
2035	12.40	12.69	15.89	17.02	23.94
2040	12.40	12.10	15.64	16.80	24.80
2045	12.40	11.61	15.48	16.66	25.80
2050	12.40	11.39	15.53	16.72	26.93
2055	12.40	11.28	15.63	16.81	27.87
2060	12.40	11.18	15.63	16.81	28.49
25-year averages:					
1982-2006	12.01	9.75	10.46	11.37	12.73
2007-2031	12.40	11.30	13.15	14.08	17.84
2032-2056	12.40	11.88	15.65	16.81	25.66
75-year average:					
1982-2056	12.27	10.98	13.09	14.09	18.74

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate, tax rate, and taxable payroll are presented in the text.

It is important to recognize that actual future OASDI costs may not necessarily fall within the range resulting under alternatives I and III. Nonetheless, because alternatives I and III constitute a reasonably wide range of economic and demographic conditions, the resulting cost estimates delineate a reasonable range of possibilities for future program costs.

Table 30 shows a comparison of the cost as a percentage of Gross National Product (GNP) estimated under the four alternatives. There are various similarities between the patterns of these cost percentages and the cost rates shown in the previous table. Under alternatives I, II-A, and II-B, the percentages generally decline slowly for the next 20 years. In the last few years of the medium-range period, the percentages reach their minimum values and then begin to rise slowly. Under alternative III, the percentages generally rise slightly to a peak around 1990 and then generally decline for about 10 to 15 years before beginning to rise again. After the medium-range period, under each alternative, the percentages increase rapidly (because of the demographic shift discussed earlier) and peak around 2030 under alternatives I, II-A, and II-B, while continuing to increase to the end of the long-range projection period under alternative III.

Another similarity is that the costs as percentages of GNP projected under the four alternatives differ by a relatively large amount at the end of the long-range period (more than 4.2 percentage points), although differing by a much smaller amount at the end of the medium-range period (1.25 percentage points). Also, the highest percentage occurring in the medium-range period varies within a much narrower band (5.07 percent under alternative I versus 5.38 under alternative III) than does the highest occurring during the long-range period (5.26 versus more than 8 percent). In addition, the average long-range cost as a percentage of GNP projected under the various alternatives varies by a relatively large amount (from 4.54 percent under alternative I to 6.70 percent under alternative III), while the average medium-range cost varies by a much smaller amount (from 4.25 to 5.25 percent).

TABLE 30.—ESTIMATED COST OF THE OASDI SYSTEM AS PERCENT OF GNP BY ALTERNATIVE, CALENDAR YEARS 1982-2060

Calendar year	I	II-A	II-B	III
1982	5.07	5.08	5.16	5.19
1983	4.93	4.97	5.05	5.26
1984	4.82	4.87	5.03	5.28
1985	4.72	4.78	5.05	5.28
1986	4.63	4.69	5.04	5.31
1987	4.55	4.62	5.03	5.34
1988	4.48	4.55	5.00	5.37
1989	4.35	4.51	4.97	5.38
1990	4.31	4.47	4.94	5.38
1991	4.27	4.44	4.91	5.38
1992	4.24	4.41	4.87	5.35
1993	4.25	4.39	4.84	5.34
1994	4.21	4.36	4.80	5.32
1995	4.17	4.33	4.76	5.32
1996	4.11	4.29	4.70	5.31
1997	4.07	4.25	4.65	5.27
1998	4.04	4.21	4.59	5.22
1999	4.00	4.17	4.53	5.17
2000	3.94	4.13	4.48	5.15
2001	3.89	4.08	4.44	5.12
2002	3.86	4.06	4.40	5.08
2003	3.84	4.05	4.37	5.07
2004	3.84	4.05	4.35	5.06
2005	3.86	4.08	4.36	5.09
2006	3.86	4.09	4.37	5.11
2010	4.00	4.27	4.51	5.33
2015	4.38	4.71	4.92	5.89
2020	4.83	5.25	5.44	6.63
2025	5.18	5.73	5.90	7.37
2030	5.26	5.94	6.10	7.87
2035	5.10	5.91	6.05	8.13
2040	4.82	5.74	5.86	8.23
2045	4.58	5.60	5.70	8.36
2050	4.45	5.54	5.62	8.52
2055	4.37	5.49	5.54	8.61
2060	4.28	5.42	5.44	8.60
25-year averages:				
1982-2006	4.25	4.40	4.75	5.25
2007-2031	4.67	5.11	5.30	6.50
2032-2056	4.70	5.67	5.78	8.34
75-year average:				
1982-2056	4.54	5.06	5.28	6.70

Note: The definitions of alternatives I, II-A, II-B, and III are presented in the text.

Table 31 shows a comparison, by trust fund, of the average cost rates estimated under the four alternatives, with the average tax rates. In the medium range, actuarial surpluses are projected for the OASI program under alternatives I and II-A and a deficit under alternatives II-B and III; for the DI program, a surplus is projected under each alternative. The combined OASDI medium-range actuarial balance ranges from a surplus of 2.26 percent of taxable payroll under alternative I to a deficit of 0.72 percent under alternative III.

Although the OASI program has medium-range actuarial surpluses under alternatives I and II-A, the pattern of the projected cost rates is such that the OASI Trust Fund is exhausted no later than July of 1983 under all four alternatives (as shown elsewhere in this section).

In the long range, actuarial deficits are projected for the OASI program under alternatives II-A, II-B, and III, and a surplus under alternative I; for the DI program, surpluses are projected under all four alternatives. The combined OASDI long-range actuarial balance ranges from a surplus of 1.29 percent of taxable payroll under alternative I to a deficit of 6.47 percent under alternative III.

TABLE 31.—COMPARISON OF ESTIMATED AVERAGE COST RATE WITH AVERAGE TAX RATE
BY ALTERNATIVE AND TRUST FUND
[As percent of taxable payroll]

Calendar years	Average tax rate	Estimated average cost rate by alternative				Difference by alternative			
		I	II-A	II-B	III	I	II-A	II-B	III
OASI:									
1982-2006.....	9.93	8.64	9.31	10.14	11.37	1.29	0.63	-0.21	-1.44
2007-31.....	10.20	9.84	11.58	12.43	15.83	.36	-1.38	-2.23	-5.63
2032-56.....	10.20	10.58	14.11	15.20	23.60	-.38	-3.91	-5.00	-13.40
1982-2056.....	10.11	9.69	11.66	12.59	16.93	.42	-1.55	-2.48	-6.82
DI:									
1982-2006.....	2.07	1.11	1.16	1.23	1.36	.97	.92	.85	.72
2007-31.....	2.20	1.45	1.57	1.65	2.00	.75	.63	.55	.20
2032-56.....	2.20	1.30	1.54	1.61	2.07	.90	.66	.59	.13
1982-2056.....	2.16	1.29	1.42	1.50	1.81	.87	.73	.66	.35
Total:									
1982-2006.....	12.01	9.75	10.46	11.37	12.73	2.26	1.55	.64	-.72
2007-31.....	12.40	11.30	13.15	14.08	17.84	1.10	-.75	-1.68	-5.44
2032-56.....	12.40	11.88	15.65	16.81	25.66	.52	-3.25	-4.41	-13.26
1982-2056.....	12.27	10.98	13.09	14.09	18.74	1.29	-.82	-1.82	-6.47

Note: The definitions of alternatives I, II-A, II-B, and III, cost rate, tax rate, and taxable payroll are presented in the text. Totals do not necessarily equal the sum of rounded components.

Table 32 shows the trust fund ratios for the OASI and DI programs under all four alternatives. As described earlier in this section, in each case, the OASI Trust Fund is projected to become exhausted no later than July of 1983. By contrast, after 1982, and after loaning funds to the OASI Trust Fund, the DI Trust Fund is projected to grow steadily throughout both the medium-range and long-range periods. It is important to note that even with the limited authority for interfund borrowing among the OASI, DI, and HI Trust Funds through 1982, additional financing or other changes will be required to avoid the cessation of benefit payments in 1983.

The fund ratios shown after a trust fund is projected to be exhausted are theoretical and are shown for informational purposes only. Under alternative I, the OASI ratio is projected to become positive in 1990 and to increase to fairly high levels, reaching 539 percent in 2015, and then steadily decreasing. Under alternative II-A, the OASI ratio is projected to become positive in 1995 and to increase to 224 percent in 2015, before decreasing rapidly so that, by 2030, the fund is again projected to be exhausted. Under alternatives II-B and III, the OASI Trust Fund does not recover at all within the projection period after becoming exhausted in 1983. By contrast, the DI Trust Fund is not projected to be exhausted at any time within the long-range projection period. Instead, it is projected to rise to levels of more than 1,800 percent under all four alternatives.

TABLE 32.—ESTIMATED TRUST FUND RATIOS BY ALTERNATIVE AND TRUST FUND, CALENDAR YEARS 1982-2060

Calendar year	Alternative I			Alternative II-A			Alternative II-B			Alternative III		
	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total	OASI	DI	Total
1982	15	16	15	15	16	15	15	16	15	15	16	15
1983	10	8	10	10	8	10	11	8	10	11	8	11
1984	1	48	6	(¹)	47	4	(²)	43	3	(²)	39	1
1985	-7	98	4	-11	93	(¹)	(²)	84	-4	(²)	71	(²)
1986	-10	178	9	-18	169	(²)	(²)	148	-7	(²)	125	(²)
1987	-10	265	17	-24	253	3	(²)	217	-10	(²)	181	(²)
1988	-9	359	27	-28	342	8	(²)	288	-13	(²)	239	(²)
1989	-6	464	40	-30	432	15	(²)	361	-16	(²)	297	(²)
1990	(²)	567	56	-32	524	22	(²)	436	-19	(²)	356	(²)
1991	15	696	82	-26	642	39	(²)	536	-13	(²)	436	(²)
1992	31	811	110	-18	753	58	(²)	631	-7	(²)	509	(²)
1993	47	934	138	-10	859	77	(²)	723	(²)	(²)	577	(²)
1994	65	1,041	167	(¹)	961	97	(²)	812	7	(²)	643	(²)
1995	84	1,137	197	8	1,054	116	(²)	895	15	(²)	705	(²)
1996	104	1,208	228	18	1,122	136	(²)	959	23	(²)	755	(²)
1997	127	1,278	260	29	1,187	157	(²)	1,019	32	(²)	799	(²)
1998	150	1,345	293	41	1,247	178	(²)	1,076	42	(²)	837	(²)
1999	175	1,411	326	52	1,317	200	(²)	1,130	53	(²)	871	(²)
2000	202	1,468	362	67	1,369	223	(²)	1,178	64	(²)	900	(²)
2001	232	1,532	400	82	1,421	247	(²)	1,227	76	(²)	927	(²)
2002	262	1,589	438	99	1,467	271	(²)	1,270	89	(²)	951	(²)
2003	293	1,630	474	116	1,502	295	(²)	1,303	102	(²)	967	(²)
2004	324	1,656	510	133	1,526	317	(²)	1,327	115	(²)	977	(²)
2005	354	1,656	542	149	1,531	338	(²)	1,332	128	(²)	976	(²)
2006	384	1,702	576	165	1,568	358	(²)	1,366	140	(²)	991	(²)
2010	485	1,797	684	216	1,645	419	(²)	1,435	177	(²)	1,005	(²)
2015	539	1,967	745	224	1,779	434	(²)	1,549	177	(²)	1,033	(²)
2020	520	2,198	739	168	1,962	387	(²)	1,703	125	(²)	1,076	(²)
2025	457	2,549	698	67	2,240	300	(²)	1,938	31	(²)	1,162	(²)
2030	386	3,000	662	(²)	2,595	196	(²)	2,241	(²)	(²)	1,287	(²)
2035	332	3,410	651	(²)	2,902	89	(²)	2,504	(²)	(²)	1,390	(²)
2040	304	3,735	675	(²)	3,123	(²)	(²)	2,693	(²)	(²)	1,456	(²)
2045	298	4,031	719	(²)	3,295	(²)	(²)	2,837	(²)	(²)	1,515	(²)
2050	301	4,443	766	(²)	3,558	(²)	(²)	3,061	(²)	(²)	1,619	(²)
2055	305	4,942	811	(²)	3,873	(²)	(²)	3,330	(²)	(²)	1,758	(²)
2060	311	5,435	860	(²)	4,168	(²)	(²)	3,582	(²)	(²)	1,910	(²)

Trust fund is projected to be first exhausted in:.....

1983 (¹) 1983 1983 (¹) 1983 1983 (¹) 1983 1983 (¹) 1983

¹Between -0.5 percent and zero.

²The fund is projected to be exhausted and not to recover before the end of the projection period.

³Between zero and 0.5 percent.

⁴The fund is not projected to be exhausted within the projection period.

Note: The definitions of alternatives I, II-A, II-B, and III, and trust fund ratio are presented in the text. The ratios shown after the year a given fund is projected to be exhausted are theoretical and are shown for informational purposes only; see the section on "Estimated Operations and Status of the Trust Funds during the Period October 1, 1981 to December 31, 1986" for further discussion. In addition, the ratios for the total of the OASI and DI Trust Funds after 1982 are theoretical, also because under the current law, after 1982, the assets of one fund cannot be borrowed by another fund. The money assumed to be borrowed by the OASI Trust Fund in December 1982 is assumed to be repaid in 1992 under alternative I, in 1998 under alternative II-A, and not at any time in the long-range projection period under alternatives II-B and III.

The cost estimates and actuarial balances shown in this report are different from those published in last year's report. Table 33 itemizes the reasons for the differences—together with their estimated cost effects—between the estimates under alternatives II-A and II-B in last year's report and those under the corresponding alternatives in this report.

TABLE 33.—CHANGE IN ESTIMATED AVERAGE ANNUAL COST RATE UNDER ALTERNATIVES II-A AND II-B BY TRUST FUND, PROJECTION PERIOD, AND REASON FOR CHANGE
[As percent of taxable payroll]

Item	Medium range			Long range		
	OASI	DI	Total	OASI	DI	Total
Alternative II-A:						
Shown in last year's report: ¹						
Actuarial balance	+0.47	+0.80	+1.27	-1.61	+0.68	-0.93
Average tax rate.....	9.90	2.04	11.94	10.10	2.15	12.25
Estimated average cost rate.....	9.43	1.24	10.67	11.71	1.47	13.17
Changes in estimated average cost rate due to changes in: ²						
Social Security Act.....	-.14	-.04	-.18	-.13	-.04	-.18
Valuation date	-.04	-.00	-.04	+.06	+.00	+.06
Economic assumptions.....	+ .16	+.01	+.17	+.05	+.00	+.05
Disability assumptions.....	-.00	-.10	-.10	-.00	-.13	-.13
All other factors.....	-.10	+.04	-.06	-.03	+.12	+.10
Total change in estimated average cost rate	-.12	-.08	-.21	-.05	-.05	-.09
Shown in this report: ³						
Estimated average cost rate.....	9.31	1.16	10.46	11.66	1.42	13.09
Average tax rate.....	9.93	2.07	12.01	10.11	2.16	12.27
Actuarial balance	+.63	+.92	+1.55	-1.55	+.73	-.82
Alternative II-B:						
Shown in last year's report: ⁴						
Actuarial balance	-.31	+.74	+.43	-2.44	+.62	-1.82
Average tax rate.....	9.90	2.04	11.94	10.10	2.15	12.25
Estimated average cost rate.....	10.21	1.30	11.51	12.54	1.52	14.07
Changes in estimated average cost rate due to changes in: ²						
Social Security Act.....	-.15	-.04	-.19	-.14	-.05	-.19
Valuation date	-.00	+.00	-.00	+.07	+.00	+.07
Economic assumptions.....	+ .13	+.02	+.15	+.05	+.00	+.06
Disability assumptions.....	-.00	-.10	-.10	-.00	-.13	-.13
All other factors.....	-.05	+.04	-.01	+.06	+.15	+.20
Total change in estimated average cost rate	-.07	-.07	-.15	+.05	-.02	+.02
Shown in this report: ³						
Estimated average cost rate.....	10.14	1.23	11.37	12.59	1.50	14.09
Average tax rate.....	9.93	2.07	12.01	10.11	2.16	12.27
Actuarial balance	-.21	+.85	+.64	-2.48	+.66	-1.82

¹Cost rates and taxable payroll are calculated under alternative II-A described in last year's report, which incorporates ultimate annual increases of 5 percent in average wages in covered employment and 3 percent in the CPI, an ultimate annual unemployment rate of 5 percent, and an ultimate total fertility rate of 2.1 children per woman. The averages are computed over projection periods commencing with 1981.

²See the text for a discussion of the items shown.

³The definitions of alternatives II-A and II-B are presented in the text. The averages are computed over projection periods commencing with 1982.

⁴Cost rates and taxable payroll are calculated under alternative II-B described in last year's report, which incorporates ultimate annual increases of 5.5 percent in average wages in covered employment and 4 percent in the CPI, an ultimate annual unemployment rate of 5 percent, and an ultimate total fertility rate of 2.1 children per woman. The averages are computed over projection periods commencing with 1981.

Note: The definitions of cost rate, tax rate, taxable payroll, actuarial balance, and projection period are presented in the text. Totals do not necessarily equal the sum of rounded components.

Two amendments to the Social Security Act were enacted since the last report, as described in a preceding section. The OASDI cost effect is a net decrease in the estimated average medium-range and long-range cost rates.

In changing from the valuation periods of last year's report, which were 1981-2005 and 1981-2055 for the medium-range and long-range periods, respectively, to the valuation periods of this report, 1982-2006 and 1982-2056, the year 1981 is replaced by 2006 in the medium range and 2056 in the long range. The estimated cost rate in the replacement year is higher than that in the year being replaced (except in the OASI medium-range period), thereby increasing the estimated average cost rate, even in the absence of other changes.

The ultimate economic assumptions in both alternatives II-A and II-B are the same as in the corresponding alternatives in last year's report. However, both alternatives were revised in the short-range period to take account of the current recession. This results in a moderate increase in the average medium-range cost rate and a smaller increase in the average long-range cost rate.

Changes in the assumed disability incidence rates were made to reflect more recent experience. These changes result in decreases in both the estimated average medium-range and long-range cost rates.

Numerous changes were made in other factors and in methods used to project the costs of the OASDI program. A major change was in the projection of the percentages of persons (by age and sex) who are in covered employment. Another change was the incorporation of more recent average benefit data in the projection of the level of average benefits. A third change was in the projection of average retired-worker benefits. This year, the changing mix of the age at entitlement of retired workers is reflected more precisely in the average amount of benefit reduction for early retirement or increase for delayed retirement. For the OASI program, the net effect of these changes is generally to decrease the estimated average medium-range and long-range cost rates, except for the average long-range cost rate under alternative II-B. For the DI program, the net effect is to increase the estimated average medium-range and long-range cost rates under both intermediate alternatives.

VIII. CONCLUSION

The cost estimates in this report are presented on the basis of four sets of economic and demographic assumptions, which are characterized as optimistic (alternative I), intermediate (alternatives II-A and II-B), and pessimistic (alternative III). Of the two intermediate sets, alternative II-A assumes future economic performance resembling that of more robust recent economic expansions which result from policies to stimulate growth and lower inflation. Alternative II-B assumes the adoption of policies which would result in an economic performance resembling less robust recent economic expansions.

The actuarial cost estimates presented in this report confirm the warning in last year's report that, without legislation, the OASI Trust Fund would be exhausted in the latter half of 1982. After last year's report was published, amendments were enacted that reduce the amount of benefits payable under the program. However, most of the reduction in benefit payments occurs after 1982, and the OASI Trust Fund would still be exhausted in the latter half of 1982 were it not for the temporary authority for interfund borrowing that was enacted in December 1981. Full use of this authority would permit the OASI Trust Fund to continue timely payment of benefits through June 1983. The timely payment of benefits past June 1983 is not assured because the authority for interfund borrowing ends on December 31, 1982, and any loans made under such authority can be no larger than the amount required to ensure timely payment of benefits for the 6-month period following the date of the loan. Thus, based on the estimates in this report, it is clear that the OASI Trust Fund will be exhausted no later than July 1983 unless remedial legislation is enacted.

The DI Trust Fund, on the other hand, is expected to increase rapidly after 1982. The expected future growth in the assets of the DI Trust Fund, however, is generally much lower than the expected decline in the assets of the OASI Trust Fund. Thus, the enactment of new legislation to reallocate tax rates from the DI Trust Fund to the OASI Trust Fund, or to permit continued interfund borrowing solely between OASI and DI (that is, excluding HI), would only postpone exhaustion of the OASI Trust Fund until sometime later than July, but before the end of 1983.

Furthermore, even if the authority for interfund borrowing among all three trust funds (including HI) were extended beyond 1982, it is very likely that the OASI Trust Fund would still become exhausted during the 1980's, when the combined assets of the three trust funds become insufficient to pay the combined expenditures on a timely basis. This is in spite of the Social Security tax rate increases that occurred in 1981 and 1982 and the increases scheduled for 1985 and 1986. As indicated by the estimates shown in Appendix F, this depletion would occur in 1984 under alternative II-B economic conditions, or as early as the end of 1983—under the more adverse alternative III assumptions. Even under the more optimistic assumptions of alternative II-A, there is virtually no margin of safety in the estimated operations of the three trust funds, combined. Thus, interfund borrowing by itself is not a satisfactory solution to the short-range financing problem.

Long-range projections are traditionally made for a 75-year period. Information is supplied for the period as a whole, for the three 25-year periods contained within the 75-year span, for each year in the first 25-year period, and for every fifth year thereafter.

The long-range projections show that if a viable solution to the immediate short-range financing crisis is enacted, it will be followed by a period of rising balances, beginning in the late 1980's or early 1990's, for the combined OASI and DI Trust Funds during the remainder of the first 25-year period under alternatives I, II-A, and II-B. For this period as a whole, the average annual income from OASDI taxes is estimated to exceed the average annual outgo by 1.55 percent of taxable payroll under alternative II-A and 0.64 percent under alternative II-B.

Although the average financial status of the OASDI program is favorable for the next 25 years under all the alternatives except alternative III, the same is not true for the 75-year period. The estimated average annual tax income for the entire 75-year projection period falls below the estimated average annual outgo for the period under all the sets of assumptions except alternative I. The resulting average deficit over the 75-year period is 0.82 percent of taxable payroll under alternative II-A and 1.82 percent under alternative II-B. This is because tax receipts fall below outgo at an increasing rate in the second and third 25-year periods, in which shortfalls average 0.75 percent of payroll and 3.25 percent of payroll, respectively, under alternative II-A, and 1.68 percent of payroll and 4.41 percent of payroll, respectively, under alternative II-B. Estimates for individual years clearly indicate the pattern of early annual surpluses followed by continual annual deficits under alternatives II-A and II-B. Under alternative III, OASDI tax income is estimated to be less than OASDI expenditures in every year of the 75-year projection period.

When the financial status of the HI program is considered in conjunction with the OASDI program, the situation for the combined OASDI and HI system over the next 25 years is worse than for the OASDI program. Under alternative II-A, the initial 25-year average surplus for the OASDI program is completely offset by the average HI deficit. Under alternative II-B, the average OASDI surplus during the first 25 years is more than offset by the average HI deficit, resulting in a net deficit of 1.32 percent of payroll in the combined system during the period. This situation emphasizes the need to do more than extend interfund borrowing in order to restore the financial strength of the combined system on both a short-run and a long-run basis.

The economic and demographic assumptions underlying the estimates traditionally have been treated as outside factors acting upon the OASDI system while being largely unaffected by it. We have continued to follow that procedure in preparing the estimates shown in this report. However, because of the size and nature of the OASDI and HI system, it is becoming increasingly apparent that interaction of this system and the economy as a whole deserves attention. As has been shown earlier in the report, higher real growth, real wages, and labor-force participation increase tax revenues, thereby reducing the relative burden on workers to support OASDI and HI benefits. The OASDI and HI system may

well impact labor-force participation, savings and investment, and growth, which, in turn, affect the economy's performance. The Board therefore recommends that attention be given to the long-run interaction of the OASDI and HI system and the economy in future research and policy deliberations on the role and structure of the system.

Because the President has established the National Commission on Social Security Reform, the Board has no legislative recommendations at this time and awaits the Commission's report, which is due by December 31, 1982.